

GUJARAT TECHNOLOGICAL UNIVERSITY
B.E. - SEMESTER – VIII EXAMINATION – OCTOBER 2012

Subject code: 180502**Date: 29/10/2012****Subject Name: Petroleum Refining and Petrochemicals****Time: 02.30pm - 05.00pm****Total Marks: 70****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

Q.1 (a) Explain Atmospheric distillation & Vacuum distillation to obtain principal fractions. **07**

(b) Discuss Fluid catalytic cracking in detail with neat sketch. **07**

Q.2 (a) Discuss delayed coking operation with major engineering problems involved. **07**

(b) Discuss the origin and formation of petroleum along with organic theories. **07**

OR

(b) Write short notes on Dehydration and desalting of crudes. **07**

Q.3 (a) Explain the term evaluation of petroleum crude. Discuss the composition and distillation characteristics of petroleum crude. **07**

(b) Discuss the Octane number and Cetane number **07**

OR

Q.3 (a) Explain the Catalytic Reforming process in detail. **07**

(b) Explain the doctors sweetening process for gasoline treatment. **07**

Q.4 (a) Explain the major engineering problems involved in the manufacturing of Vinyl chloride monomer with its applications. **07**

(b) Describe with a neat flow diagram manufacture of Ethylene Oxide. **07**

OR

Q.4 (a) Define Petrochemical. Which are the important raw materials and their resources used in manufacturing of petrochemicals? **07**

Q.4 (b) Explain with a neat flowsheet manufacture of methanol. **07**

Q.5 (a) Discuss the dehydrogenation of ethylbenzene for styrene along with major engineering problems. **07**

(b) Explain the manufacture process of HDPE. **07**

OR

Q.5 (a) Discuss the test methods and properties of diesel fuels. **07**

(b) Write a short note on Petrochemicals industry in Gujarat. **07**
